

WEST Search History

DATE: Thursday, May 25, 2006

<u>Hide?</u>	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
<i>DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=OR</i>			
<input type="checkbox"/>	L16	L15 and pef\$4	24
<input type="checkbox"/>	L15	L14 and dutpas\$4	25
<input type="checkbox"/>	L14	L13 and (pfu\$4 or taq\$4 or aquatic\$4 or furios\$4)	82
<input type="checkbox"/>	L13	L6 and ((Hogrefe or Hansen).in. or stratagene.asn.)	91
<input type="checkbox"/>	L12	L1 and stratagene.asn.	188
<input type="checkbox"/>	L11	L1 and (Hogrefe or Hansen).in.	263
<input type="checkbox"/>	L10	l8 and (gp\$4 or gp32\$4)	9
<input type="checkbox"/>	L9	L8 same (gp\$4 or gp32\$4)	0
<input type="checkbox"/>	L8	L7 same (enhanc\$4 or dutpas\$4)	81
<input type="checkbox"/>	L7	L6 same (pfu\$4 or taq\$4 or aquatic\$4 or furios\$4)	3851
<input type="checkbox"/>	L6	L1 same exonucleas\$4	7635
<input type="checkbox"/>	L5	L4 and (gp\$4 or gp32\$4)	2332
<input type="checkbox"/>	L4	L3 and (enhanc\$5 or dutpas\$4)	7436
<input type="checkbox"/>	L3	L2 and (pfu\$4 or taq\$4 or aquatic\$4 or furios\$4)	8644
<input type="checkbox"/>	L2	L1 and exonucleas\$4	13265
<input type="checkbox"/>	L1	dna\$4 same polymeras\$4	79731

END OF SEARCH HISTORY

=> d his full

(FILE 'HOME' ENTERED AT 21:40:09 ON 25 MAY 2006)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 21:40:31 ON 25 MAY 2006
SEA POLYMERIC(S)DNA?

5500 FILE ADISCTI
260 FILE ADISINSIGHT
63 FILE ADISNEWS
4297 FILE AGRICOLA
379 FILE ANABSTR
74 FILE ANTE
108 FILE AQUALINE
1629 FILE AQUASCI
5780 FILE BIOENG
71017 FILE BIOSIS
20594 FILE BIOTECHABS
20594 FILE BIOTECHDS
43907 FILE BIOTECHNO
14152 FILE CABA
59120 FILE CAPLUS
1051 FILE CEABA-VTB
177 FILE CIN
908 FILE CONFSCI
27 FILE CROPB
80 FILE CROPU
604 FILE DDFB
1919 FILE DDFU
133931 FILE DGENE
3820 FILE DISSABS
604 FILE DRUGB
3190 FILE DRUGU
525 FILE EMBAL
51493 FILE EMBASE
28077 FILE ESBIOTBASE
623 FILE FROSTI
407 FILE FSTA
1534612 FILE GENBANK
135 FILE HEALSAFE
5709 FILE IFIPAT
41 FILE IMSDRUGNEWS
72 FILE IMSRESEARCH
5626 FILE JICST-EPLUS
38 FILE KOSMET
36341 FILE LIFESCI
57883 FILE MEDLINE
507 FILE NTIS
2 FILE NUTRACEUT
507 FILE OCEAN
31260 FILE PASCAL
208 FILE PCTGEN
547 FILE PHAR
35 FILE PHARMAML
2 FILE PHIC
272 FILE PHIN
2652 FILE PROMT
236 FILE PROUSDDR
6 FILE RDISCLOSURE
40090 FILE SCISEARCH
5 FILE SYNTHLINE
25034 FILE TOXCENTER
67666 FILE USPATFULL
6062 FILE USPAT2
8 FILE VETB

52 FILE VETU
132 FILE WATER
6559 FILE WPIDS
45 FILE WPIFV
6559 FILE WPINDEX
171 FILE IPA
256 FILE NAPRALERT
2364 FILE NLDB
L1 QUE POLYMERAS?(S) DNA?

D RANK

FILE 'BIOSIS, USPATFULL, CAPLUS, MEDLINE, EMBASE, BIOTECHNO, SCISEARCH,
LIFESCI' ENTERED AT 21:44:53 ON 25 MAY 2006
L2 427517 SEA POLYMERAS?(S) DNA?
L3 30762 SEA L2 (S)(PFU? OR TAQ? OR FURIO? OR AQUATIC?)
L4 4130 SEA L3(S) EXONUCLEAS?
L5 94 SEA L4 (S)(ENHANC? OR DUTPAS?)
L6 90 DUP REM L5 (4 DUPLICATES REMOVED)
 D TI L6 1-90
 D IBIB ABS L6 10 11 16 28 36 44 48 74 78 83 88 90
L7 26 SEA L4 (S)(GP32? OR GP?)
L8 26 DUP REM L7 (0 DUPLICATES REMOVED)
 D TI L8 1-26
 D L8 IBIB ABS
 D L8 1-26 IBIB ABS

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID: sssptal652dmr

PASSWORD :

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * * Welcome to STN International * * * * * * * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 JAN 17 Pre-1988 INPI data added to MARPAT
NEWS 4 FEB 21 STN AnaVist, Version 1.1, lets you share your STN AnaVist visualization results
NEWS 5 FEB 22 The IPC thesaurus added to additional patent databases on STN
NEWS 6 FEB 22 Updates in EPFULL; IPC 8 enhancements added
NEWS 7 FEB 27 New STN AnaVist pricing effective March 1, 2006
NEWS 8 MAR 03 Updates in PATDPA; addition of IPC 8 data without attributes
NEWS 9 MAR 22 EMBASE is now updated on a daily basis
NEWS 10 APR 03 New IPC 8 fields and IPC thesaurus added to PATDPAFULL
NEWS 11 APR 03 Bibliographic data updates resume; new IPC 8 fields and IPC thesaurus added in PCTFULL
NEWS 12 APR 04 STN AnaVist \$500 visualization usage credit offered
NEWS 13 APR 12 LINSPEC, learning database for INSPEC, reloaded and enhanced
NEWS 14 APR 12 Improved structure highlighting in FQHIT and QHIT display in MARPAT
NEWS 15 APR 12 Derwent World Patents Index to be reloaded and enhanced during second quarter; strategies may be affected
NEWS 16 MAY 10 CA/CAplus enhanced with 1900-1906 U.S. patent records
NEWS 17 MAY 11 KOREAPAT updates resume
NEWS 18 MAY 19 Derwent World Patents Index to be reloaded and enhanced

NEWS EXPRESS FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
<http://download.cas.org/express/v8.0-Discover/>

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8
NEWS X25 X.25 communication option no longer available after June 2006

Enter NEWS followed by the item number or name to see news on that specific topic.

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If you provide us with your name, login ID, and e-mail address, you will be entered in a drawing to win a free iPod(R). Your responses will be kept confidential and will help us make future improvements to STN.

Take survey: <http://www.zoomerang.com/survey.zgi?p=WEB2259HNKWTUW>

Thank you in advance for your participation.

FILE 'HOME' ENTERED AT 21:40:09 ON 25 MAY 2006

=> index bioscience medicine
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS

FULL ESTIMATED COST

| SINCE FILE
ENTRY | TOTAL
SESSION |
|---------------------|------------------|
| 0.21 | 0.21 |

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONO2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 21:40:31 ON 25 MAY 2006

71 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view search error messages that display as 0* with SET DETAIL OFF.

```
=> s polymeras? (s) dna?
      5500  FILE ADISCTI
      260   FILE ADISINSIGH
      63    FILE ADISNEWS
     4297  FILE AGRICOLA
     379   FILE ANABSTR
      74    FILE ANTE
     108   FILE AQUALINE
    1629   FILE AQUASCI
    5780   FILE BIOENG
    71017  FILE BIOSIS
   20594   FILE BIOTECHABS
   20594   FILE BIOTECHDS
   43907  FILE BIOTECHNO
   14152  FILE CABA
   59120  FILE CAPLUS
   1051   FILE CEABA-VTB
      177  FILE CIN
      908  FILE CONFSCI
      27   FILE CROPB
      80   FILE CROPU
      604  FILE DDFB
21 FILES SEARCHED...
      1919  FILE DDFU
   133931  FILE DGENE
23 FILES SEARCHED...
      3820  FILE DISSABS
      604   FILE DRUGB
     3190  FILE DRUGU
      525   FILE EMBAL
    51493  FILE EMBASE
   28077  FILE ESBIOBASE
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623 FILE FROSTI
407 FILE FSTA
1534612 FILE GENBANK
35 FILES SEARCHED...
135 FILE HEALSAFE
5709 FILE IFIPAT
41 FILE IMSDRUGNEWS
72 FILE IMSRESEARCH
5626 FILE JICST-EPLUS
38 FILE KOSMET
36341 FILE LIFESCI
57883 FILE MEDLINE
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507 FILE OCEAN
31260 FILE PASCAL
208 FILE PCTGEN
547 FILE PHAR
35 FILE PHARMAML
2 FILE PHIC
272 FILE PHIN
2652 FILE PROMT
236 FILE PROUSDDR
6 FILE RDISCLOSURE
40090 FILE SCISEARCH
5 FILE SYNTHLINE

59 FILES SEARCHED...
25034 FILE TOXCENTER
67666 FILE USPATFULL
6062 FILE USPAT2
8 FILE VETB
52 FILE VETU
132 FILE WATER
6559 FILE WPIDS
45 FILE WPIFV
6559 FILE WPINDEX
171 FILE IPA
256 FILE NAPRALERT
2364 FILE NLDB

66 FILES HAVE ONE OR MORE ANSWERS, 71 FILES SEARCHED IN STNINDEX

L1 QUE POLYMERAS? (S) DNA?

=> d rank
F1 1534612 GENBANK
F2 133931 DGENE
F3 71017 BIOSIS
F4 67666 USPATFULL
F5 59120 CAPLUS
F6 57883 MEDLINE
F7 51493 EMBASE
F8 43907 BIOTECHNO
F9 40090 SCISEARCH
F10 36341 LIFESCI
F11 31260 PASCAL
F12 28077 ESBIOBASE
F13 25034 TOXCENTER
F14 20594 BIOTECHABS
F15 20594 BIOTECHDS
F16 14152 CABA
F17 6559 WPIDS
F18 6559 WPINDEX
F19 6062 USPAT2
F20 5780 BIOENG

| | | |
|-----|------|-------------|
| F21 | 5709 | IFIPAT |
| F22 | 5626 | JICST-EPLUS |
| F23 | 5500 | ADISCTI |
| F24 | 4297 | AGRICOLA |
| F25 | 3820 | DISSABS |
| F26 | 3190 | DRUGU |
| F27 | 2652 | PROMT |
| F28 | 2364 | NLDB |
| F29 | 1919 | DDFU |
| F30 | 1629 | AQUASCI |
| F31 | 1051 | CEABA-VTB |
| F32 | 908 | CONFSCI |
| F33 | 623 | FROSTI |
| F34 | 604 | DDFB |
| F35 | 604 | DRUGB |
| F36 | 547 | PHAR |
| F37 | 525 | EMBAL |
| F38 | 507 | NTIS |
| F39 | 507 | OCEAN |
| F40 | 407 | FSTA |
| F41 | 379 | ANABSTR |
| F42 | 272 | PHIN |
| F43 | 260 | ADISINSIGHT |
| F44 | 256 | NAPRALERT |
| F45 | 236 | PROUSDDR |
| F46 | 208 | PCTGEN |
| F47 | 177 | CIN |
| F48 | 171 | IPA |
| F49 | 135 | HEALSAFE |
| F50 | 132 | WATER |
| F51 | 108 | AQUALINE |
| F52 | 80 | CROPU |
| F53 | 74 | ANTE |
| F54 | 72 | IMSRESEARCH |
| F55 | 63 | ADISNEWS |
| F56 | 52 | VETU |
| F57 | 45 | WPIFV |
| F58 | 41 | IMSDRUGNEWS |
| F59 | 38 | KOSMET |
| F60 | 35 | PHARMAML |
| F61 | 27 | CROPB |
| F62 | 8 | VETB |
| F63 | 6 | RDISCLOSURE |
| F64 | 5 | SYNTHLINE |
| F65 | 2 | NUTRACEUT |
| F66 | 2 | PHIC |

| | | SINCE FILE
ENTRY | TOTAL
SESSION |
|---------------------|----------------------|---------------------|------------------|
| => file f3-f10 | COST IN U.S. DOLLARS | | |
| FULL ESTIMATED COST | | 4.27 | 4.48 |

FILE 'BIOSIS' ENTERED AT 21:44:53 ON 25 MAY 2006
 Copyright (c) 2006 The Thomson Corporation

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=> s polymeras?(s)dna?
L2 427517 POLYMERAS?(S) DNA?

=> s 12 (s)(pfu? or taq? or furio? or aquatic?)
L3 30762 L2 (S)(PFU? OR TAQ? OR FURIO? OR AQUATIC?)

=> s 13(s)exonucleas?
L4 4130 L3(S) EXONUCLEAS?

=> s 14 (s)(enhanc? or dutpas? or 32?)
TERM '32?' EXCEEDED TRUNCATION LIMITS - SEARCH ENDED
You have entered a truncated stem which occurs in too many terms.
Make the stem longer and try again. For example, if your original
term was 'degr?' to search for variations and the abbreviation for
'degradation', you could replace it with the expression '(degrdn OR
degrad?)'. If your search term was numeric, e.g., 'C>5', reduce the
size of the range.

=> s 14 (s)(enhanc? or dutpas?)
L5 94 L4 (S)(ENHANC? OR DUTPAS?)

=> dup rem 15
PROCESSING COMPLETED FOR L5
L6 90 DUP REM L5 (4 DUPLICATES REMOVED)

=> d ti 16 1-90

L6 ANSWER 1 OF 90 USPATFULL on STN
TI Methods of using FET labeled oligonucleotides that include a 3'-5'
exonuclease resistant quencher domain and compositions for practicing
the same

L6 ANSWER 2 OF 90 USPATFULL on STN
TI Thermostable enzyme promoting the fidelity of thermostable DNA
polymerases-for improvement of nucleic acid synthesis and amplification
in vitro

L6 ANSWER 3 OF 90 USPATFULL on STN
TI Complete genome and protein sequence of the hyperthermophile
methanopyrus kandleri av19 and monophyly of archael methanogens and
methods of use thereof

L6 ANSWER 4 OF 90 USPATFULL on STN
TI Method for plasmid preparation by conversion of open circular plasmid to
supercoiled plasmid

L6 ANSWER 5 OF 90 USPATFULL on STN
TI PURIFIED THERMOSTABLE PYROCOCCUS FURIOSUS DNA POLYMERASE I

L6 ANSWER 6 OF 90 USPATFULL on STN
TI Nucleotide sequences specific to Francisella tularensis and methods for

- the detection of *Francisella tularensis*
- L6 ANSWER 7 OF 90 USPATFULL on STN
TI BINARY PROBE AND CLAMP COMPOSITION.
- L6 ANSWER 8 OF 90 USPATFULL on STN
TI Nucleotide sequences specific to *Yersinia pestis* and methods for the detection of *Yersinia pestis*
- L6 ANSWER 9 OF 90 USPATFULL on STN
TI Genotype specific detection of *Chlamydophila psittaci*
- L6 ANSWER 10 OF 90 USPATFULL on STN
TI Thermostable enzyme promoting the fidelity of thermostable DNA polymerases-for improvement of nucleic acid synthesis and amplification in vitro
- L6 ANSWER 11 OF 90 USPATFULL on STN
TI Purified thermostable *Pyrococcus furiosus* DNA polymerase I
- L6 ANSWER 12 OF 90 USPATFULL on STN
TI Oligonucleotides labeled with a plurality of fluorophores
- L6 ANSWER 13 OF 90 USPATFULL on STN
TI Method for plasmid preparation by conversion of open circular plasmid to supercoiled plasmid
- L6 ANSWER 14 OF 90 USPATFULL on STN
TI Nucleic acid molecules encoding cel I endonuclease and methods of use thereof
- L6 ANSWER 15 OF 90 USPATFULL on STN
TI Method of increasing complementarity in a heteroduplex
- L6 ANSWER 16 OF 90 USPATFULL on STN
TI Compositions and methods for synthesizing cDNA
- L6 ANSWER 17 OF 90 USPATFULL on STN
TI DNA polymerase compositions for quantitative PCR and methods thereof
- L6 ANSWER 18 OF 90 USPATFULL on STN
TI DNA polymerase fusions and uses thereof
- L6 ANSWER 19 OF 90 USPATFULL on STN
TI Synthesis and compositions of 2'-terminator nucleotides
- L6 ANSWER 20 OF 90 USPATFULL on STN
TI Detection format for hot start real time polymerase chain reaction
- L6 ANSWER 21 OF 90 USPATFULL on STN
TI Compositions and methods for random nucleic acid mutagenesis
- L6 ANSWER 22 OF 90 USPATFULL on STN
TI Methods and compositions for amplification of dna
- L6 ANSWER 23 OF 90 USPATFULL on STN
TI Pfu replication accessory factors and methods of use
- L6 ANSWER 24 OF 90 CAPLUS COPYRIGHT 2006 ACS on STN
TI Construction of thermostable DNA polymerase I variants from *Thermus aquaticus* having enhanced catalytic activities for use in RT-PCR, and screening thermostable enzyme variants using bacteriophage display
- L6 ANSWER 25 OF 90 USPATFULL on STN
TI Methods and compositions for RNA detection and quantitation

- L6 ANSWER 26 OF 90 USPATFULL on STN
TI Compositions and methods for reverse transcriptase-polymerase chain reaction (RT-PCR)
- L6 ANSWER 27 OF 90 USPATFULL on STN
TI DNA polymerase blends and uses thereof
- L6 ANSWER 28 OF 90 USPATFULL on STN
TI Nucleic acid modifying enzymes
- L6 ANSWER 29 OF 90 USPATFULL on STN
TI Method of increasing complementarity in a heteroduplex
- L6 ANSWER 30 OF 90 USPATFULL on STN
TI Method of detecting inorganic phosphoric acid, pyrophosphate and nucleic acid, and method of typing SNP sequence of DNA
- L6 ANSWER 31 OF 90 USPATFULL on STN
TI Polynucleotide sequence variants
- L6 ANSWER 32 OF 90 USPATFULL on STN
TI Primers and primer sets for use in methods to detect the presence of Acidovorax avenae subsp. citrulli
- L6 ANSWER 33 OF 90 USPATFULL on STN
TI Pesticidally active proteins and polynucleotides obtainable from Paenibacillus species
- L6 ANSWER 34 OF 90 USPATFULL on STN
TI DNA polymerases with reduced base analog detection activity
- L6 ANSWER 35 OF 90 USPATFULL on STN
TI DNA polymerases with reduced base analog detection activity
- L6 ANSWER 36 OF 90 USPATFULL on STN
TI Compositions for DNA amplification, synthesis, and mutagenesis
- L6 ANSWER 37 OF 90 USPATFULL on STN
TI Detection and quantification of human herpes viruses
- L6 ANSWER 38 OF 90 USPATFULL on STN
TI Method for the specific determination of dna sequences by means of parallel amplification
- L6 ANSWER 39 OF 90 USPATFULL on STN
TI Compositions and methods utilizing DNA polymerases
- L6 ANSWER 40 OF 90 USPATFULL on STN
TI Methods for identifying low-abundance polynucleotides and related compositions
- L6 ANSWER 41 OF 90 USPATFULL on STN
TI Methods of using improved polymerases
- L6 ANSWER 42 OF 90 USPATFULL on STN
TI DNA polymerase mutants with reverse transcriptase activity
- L6 ANSWER 43 OF 90 USPATFULL on STN
TI Method of increasing complementarity in a heteroduplex
- L6 ANSWER 44 OF 90 USPATFULL on STN
TI High fidelity DNA polymerase compositions and uses therefor
- L6 ANSWER 45 OF 90 USPATFULL on STN

- TI Methods of using FET labeled oligonucleotides that include a 3'-5' exonuclease resistant quencher domain and compositions for practicing the same
- L6 ANSWER 46 OF 90 USPATFULL on STN
TI Gene expression analysis using nicking agents
- L6 ANSWER 47 OF 90 USPATFULL on STN
TI Methods of using FET labeled oligonucleotides that include a 3'-5' exonuclease resistant quencher domain and compositions for practicing the same
- L6 ANSWER 48 OF 90 USPATFULL on STN
TI Nucleic acid modifying enzymes
- L6 ANSWER 49 OF 90 USPATFULL on STN
TI Method for the detection of salmonella enterica serovar enteritidis
- L6 ANSWER 50 OF 90 USPATFULL on STN
TI Nucleic acid molecules encoding CEL I endonuclease and methods of use thereof
- L6 ANSWER 51 OF 90 USPATFULL on STN
TI Methylation analysis using nicking agents
- L6 ANSWER 52 OF 90 USPATFULL on STN
TI Nucleic acid modifying enzymes
- L6 ANSWER 53 OF 90 USPATFULL on STN
TI Nucleic acid molecules encoding endonucleases and methods of use thereof
- L6 ANSWER 54 OF 90 USPATFULL on STN
TI High fidelity DNA polymerase compositions and uses therefor
- L6 ANSWER 55 OF 90 USPATFULL on STN
TI Exponential amplification of nucleic acids using nicking agents
- L6 ANSWER 56 OF 90 USPATFULL on STN
TI Composition and method for hot start nucleic acid amplification
- L6 ANSWER 57 OF 90 USPATFULL on STN
TI Compositions and methods for reverse transcriptase-polymerase chain reaction (RT-PCR)
- L6 ANSWER 58 OF 90 USPATFULL on STN
TI Nucleic acid amplification using nicking agents
- L6 ANSWER 59 OF 90 USPATFULL on STN
TI In vitro method to create circular molecules for use in transformation
- L6 ANSWER 60 OF 90 USPATFULL on STN
TI Exponential nucleic acid amplification using nicking endonucleases
- L6 ANSWER 61 OF 90 USPATFULL on STN
TI DNA polymerases with enhanced length of primer extension
- L6 ANSWER 62 OF 90 USPATFULL on STN
TI COMPOSITIONS FOR DNA AMPLIFICATION, SYNTHESIS, AND MUTAGENESIS
- L6 ANSWER 63 OF 90 USPATFULL on STN
TI Computer-assisted means for assessing lifestyle risk factors
- L6 ANSWER 64 OF 90 USPATFULL on STN
TI Nucleic acid modifying enzymes

- L6 ANSWER 65 OF 90 CAPLUS COPYRIGHT 2006 ACS on STN
TI DNA polymerases and their mutants with improved properties for nucleic acid sequencing and amplification
- L6 ANSWER 66 OF 90 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
TI Cloning, expression, and purification of the His.sub.6-tagged hyper-thermostable dUTPase from Pyrococcus woesei in Escherichia coli: Application in PCR
- L6 ANSWER 67 OF 90 USPATFULL on STN
TI Method of increasing complementarity in a heteroduplex
- L6 ANSWER 68 OF 90 USPATFULL on STN
TI Method of increasing complementarity in a heteroduplex
- L6 ANSWER 69 OF 90 USPATFULL on STN
TI Compositions comprising a M-MLV reverse transcriptase and a DNA polymerase and use thereof
- L6 ANSWER 70 OF 90 USPATFULL on STN
TI Purified thermostable Pyrococcus furiosus DNA polymerase I
- L6 ANSWER 71 OF 90 USPATFULL on STN
TI Polynucleotide pools enriched in either high-abundance or low-abundance sequences
- L6 ANSWER 72 OF 90 USPATFULL on STN
TI DNA polymersases with enhanced length of primer extension
- L6 ANSWER 73 OF 90 LIFESCI COPYRIGHT 2006 CSA on STN
TI A new label technology for the detection of specific polymerase chain reaction products in a closed tube
- L6 ANSWER 74 OF 90 USPATFULL on STN
TI Purified thermostable nucleic acid polymerase enzyme from thermosiphon africanus
- L6 ANSWER 75 OF 90 USPATFULL on STN
TI Purified thermostable pyrococcus furiosus DNA polymerase I
- L6 ANSWER 76 OF 90 USPATFULL on STN
TI Purified thermostable pyrococcus furiosus DNA polymerase I
- L6 ANSWER 77 OF 90 USPATFULL on STN
TI 5' to 3' exonuclease mutations of thermostable DNA polymerases
- L6 ANSWER 78 OF 90 USPATFULL on STN
TI Methods of enhancing nucleic acid amplification
- L6 ANSWER 79 OF 90 USPATFULL on STN
TI Kits for detecting a target nucleic acid with blocking oligonucleotides
- L6 ANSWER 80 OF 90 USPATFULL on STN
TI Purified thermostable nucleic acid polymerase enzyme from Thermotoga maritima
- L6 ANSWER 81 OF 90 USPATFULL on STN
TI Methods for reducing non-specific priming in DNA detection
- L6 ANSWER 82 OF 90 USPATFULL on STN
TI Purified thermostable pyrococcus furiosus DNA polymerase I
- L6 ANSWER 83 OF 90 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
TI DUPLICATE
TI Exonucleolytic proofreading during replication of repetitive DNA

L6 ANSWER 84 OF 90 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
TI Long-distance PCR of VNTR at the D17S74 (CMM86) locus

L6 ANSWER 85 OF 90 USPATFULL on STN
TI 5' to 3' exonuclease mutations of thermostable DNA polymerases

L6 ANSWER 86 OF 90 USPATFULL on STN
TI Mutated thermostable nucleic acid polymerase enzyme from thermotoga maritima

L6 ANSWER 87 OF 90 USPATFULL on STN
TI DNA encoding a thermostable nucleic acid polymerase enzyme from thermotoga maritima

L6 ANSWER 88 OF 90 USPATFULL on STN
TI Method of using a TAQ DNA polymerase without 5'-3'-exonuclease activity

L6 ANSWER 89 OF 90 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
TI Phosphorothioate primers improve the amplification of DNA sequences by DNA polymerases with proofreading activity

L6 ANSWER 90 OF 90 LIFESCI COPYRIGHT 2006 CSA on STN
TI Amplimers with 3'-terminal phosphorothioate linkages resist degradation by Vent polymerase and reduce Taq polymerase mispriming

=> d ibib abs 16 10 11 16 28 36 44 48 74 78 83 88 90

L6 ANSWER 10 OF 90 USPATFULL on STN
ACCESSION NUMBER: 2006:95217 USPATFULL
TITLE: Thermostable enzyme promoting the fidelity of thermostable DNA polymerases-for improvement of nucleic acid synthesis and amplification in vitro
INVENTOR(S): Ankenbauer, Waltraud, Penzberg, GERMANY, FEDERAL REPUBLIC OF Laue, Frank, Paehl-Fischen, GERMANY, FEDERAL REPUBLIC OF Sobek, Harald, Penzberg, GERMANY, FEDERAL REPUBLIC OF Greif, Michael, Lenggries, GERMANY, FEDERAL REPUBLIC OF Roche Diagnostics GmbH, Mannheim, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)
PATENT ASSIGNEE(S): Roche Molecular Systems Inc., Alameda, CA, UNITED STATES (U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|-----------------------|
| PATENT INFORMATION: | US 7030220 | B1 | 20060418 |
| | WO 2001023583 | | 20010405 |
| APPLICATION INFO.: | US 2000-856850 | | 20000927 (9) |
| | WO 2000-EP9423 | | 20000927 |
| | | | 20010919 PCT 371 date |

| | NUMBER | DATE |
|-----------------------|--|----------|
| PRIORITY INFORMATION: | EP 1999-119268 | 19990928 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Horlick, Kenneth R. | |
| ASSISTANT EXAMINER: | Kim, Young J. | |
| LEGAL REPRESENTATIVE: | Townsend & Townsend & Crew LLC | |
| NUMBER OF CLAIMS: | 4 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 13 Drawing Figure(s); 16 Drawing Page(s) | |
| LINE COUNT: | 1237 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A purified thermostable enzyme is derived from the thermophilic archaeabacterium Archaeoglobus fulgidus. The enzyme can be native or recombinant, is stable under PCR conditions and exhibits double strand specific exonuclease activity. It is a 3'-5' exonuclease and cleaves to produce 5'-mononucleotides. Thermostable exonucleases are useful in many recombinant DNA techniques, in combination with a thermostable DNA polymerase like Tag especially for nucleic acid amplification by the polymerase chain reaction (PCR).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 11 OF 90 USPATFULL on STN

ACCESSION NUMBER: 2005:324263 USPATFULL

TITLE: Purified thermostable Pyrococcus furiosus DNA polymerase I

INVENTOR(S): Mathur, Eric J., Solana Beach, CA, UNITED STATES

PATENT ASSIGNEE(S): Stratagene, La Jolla, CA, UNITED STATES (U.S. corporation)

| NUMBER | KIND | DATE |
|--------|------|------|
|--------|------|------|

PATENT INFORMATION: US 2005282171 A1 20051222

APPLICATION INFO.: US 2004-795201 A1 20040304 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2002-176357, filed on 19 Jun 2002, PENDING Continuation of Ser. No. US 1999-244889, filed on 5 Feb 1999, GRANTED, Pat. No. US 6489150 Continuation of Ser. No. US 1991-803627, filed on 2 Dec 1991, GRANTED, Pat. No. US 5948663 Continuation-in-part of Ser. No. US 1991-776552, filed on 15 Oct 1991, ABANDONED Continuation-in-part of Ser. No. US 1991-657073, filed on 19 Feb 1991, ABANDONED Continuation-in-part of Ser. No. US 1990-620568, filed on 3 Dec 1990, ABANDONED

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP, 901 NEW YORK AVENUE, NW, WASHINGTON, DC, 20001-4413, US

NUMBER OF CLAIMS: 3

EXEMPLARY CLAIM: 1-16

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 1819

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Purified thermostable Pyrococcus furiosus DNA polymerase that migrates on a non-denaturing polyacrylamide gel faster than phosphorylase B and Taq polymerase and more slowly than bovine serum albumin and has an estimated molecular weight of 90,000-93,000 daltons when compared with a Taq polymerase standard assigned a molecular weight of 94,000 daltons.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 16 OF 90 USPATFULL on STN

ACCESSION NUMBER: 2005:144205 USPATFULL

TITLE: Compositions and methods for synthesizing cDNA

INVENTOR(S): Sorge, Joseph A., Del Mar, CA, UNITED STATES

Hogrefe, Holly, San Diego, CA, UNITED STATES

Hansen, Connie Jo, San Diego, CA, UNITED STATES

Arezzi, Bahram, Carlsbad, CA, UNITED STATES

Mullinax, Rebecca Lynn, San Diego, CA, UNITED STATES

PATENT ASSIGNEE(S): Stratagene California (U.S. corporation)

| NUMBER | KIND | DATE |
|--------|------|------|
|--------|------|------|

PATENT INFORMATION: US 2005123940 A1 20050609

APPLICATION INFO.: US 2004-853973 A1 20040526 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2003-435766, filed on 12 May 2003, PENDING Continuation-in-part of Ser. No. US 2002-223650, filed on 19 Aug 2002, PENDING Continuation-in-part of Ser. No. US 2001-896923, filed on 29 Jun 2001, PENDING Continuation-in-part of Ser. No. US 2000-698341, filed on 27 Oct 2000, PENDING

| | NUMBER | DATE |
|-----------------------|---|---------------|
| PRIORITY INFORMATION: | WO 2000-US29706 | 20001027 |
| | US 1999-162600P | 19991029 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | PALMER & DODGE, LLP, KATHLEEN M. WILLIAMS / STR, 111 HUNTINGTON AVENUE, BOSTON, MA, 02199, US | |
| NUMBER OF CLAIMS: | 35 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 28 Drawing Page(s) | |
| LINE COUNT: | 6014 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to composition, kits and methods comprising a mutant DNA polymerase exhibiting increased reverse transcriptase activity. The invention also relates to methods of generating modified cDNA.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 28 OF 90 USPATFULL on STN
ACCESSION NUMBER: 2004:247230 USPATFULL
TITLE: Nucleic acid modifying enzymes
INVENTOR(S): Wang, Yan, San Francisco, CA, UNITED STATES
Xi, Lei, Foster City, CA, UNITED STATES
Prosen, Dennis E., Foster City, CA, UNITED STATES
PATENT ASSIGNEE(S): MJ Bioworks, Inc. (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2004191825 | A1 | 20040930 |
| APPLICATION INFO.: | US 2004-821583 | A1 | 20040409 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2001-870353, filed on 30 May 2001, PENDING Continuation-in-part of Ser. No. US 2000-640958, filed on 16 Aug 2000, GRANTED, Pat. No. US 6627424 | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 2000-207567P | 20000526 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834 | |
| NUMBER OF CLAIMS: | 14 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 3 Drawing Page(s) | |
| LINE COUNT: | 2692 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for an improved generation of novel nucleic acid modifying enzymes. The improvement is the fusion of a sequence-non-specific nucleic-acid-binding domain to the enzyme in a manner that enhances the ability of the enzyme to bind and catalytically modify the nucleic acid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 36 OF 90 USPATFULL on STN

ACCESSION NUMBER: 2004:94761 USPATFULL
 TITLE: Compositions for DNA amplification, synthesis, and mutagenesis
 INVENTOR(S): Hogrefe, Holly Hurlbut, San Diego, CA, UNITED STATES
 Borns, Michael C., Escondido, CA, UNITED STATES
 Muhich, Michael L., Olivenhain, CA, UNITED STATES
 PATENT ASSIGNEE(S): Stratagene (U.S. corporation)

| NUMBER | KIND | DATE |
|--------|------|------|
|--------|------|------|

PATENT INFORMATION: US 2004072213 A1 20040415
 APPLICATION INFO.: US 2003-456848 A1 20030606 (10)
 RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-414295, filed on 6 Oct 1999, ABANDONED
 DOCUMENT TYPE: Utility
 FILE SEGMENT: APPLICATION
 LEGAL REPRESENTATIVE: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP, 1300 I STREET, NW, WASHINGTON, DC, 20005
 NUMBER OF CLAIMS: 48
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 6 Drawing Page(s)
 LINE COUNT: 1580

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides compositions comprising a thermostable non-proofreading DNA polymerase, a thermostable proofreading DNA polymerase, and a factor that substantially inhibits the incorporation of undesired nucleotides or analogs thereof into a DNA polymer. The compositions may further comprise a buffer that enhances a polymerization reaction involving DNA polymerases. The invention also provides various methods of amplifying, synthesizing, or mutagenizing nucleic acids of interest using these novel compositions. Kits that comprise the compositions are also provided for amplifying, synthesizing, and mutagenizing nucleic acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 44 OF 90 USPATFULL on STN
 ACCESSION NUMBER: 2003:257690 USPATFULL
 TITLE: High fidelity DNA polymerase compositions and uses therefor
 INVENTOR(S): Hogrefe, Holly, San Diego, CA, UNITED STATES
 Borns, Michael, Escondido, CA, UNITED STATES
 Sorge, Joseph, Wilson, WY, UNITED STATES

| NUMBER | KIND | DATE |
|--------|------|------|
|--------|------|------|

PATENT INFORMATION: US 2003180741 A1 20030925
 APPLICATION INFO.: US 2002-208508 A1 20020730 (10)
 RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2002-79241, filed on 20 Feb 2002, PENDING Continuation-in-part of Ser. No. US 2001-35091, filed on 21 Dec 2001, PENDING
 DOCUMENT TYPE: Utility
 FILE SEGMENT: APPLICATION
 LEGAL REPRESENTATIVE: PALMER & DODGE, LLP, KATHLEEN M. WILLIAMS / STR, 111 HUNTINGTON AVENUE, BOSTON, MA, 02199
 NUMBER OF CLAIMS: 16
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 100 Drawing Page(s)
 LINE COUNT: 2549

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The subject invention relates to compositions comprising an enzyme mixture which comprises a first enzyme and a second enzyme, where the first enzyme comprises a DNA polymerization activity and the second enzyme comprises an 3'-5' exonuclease activity and a reduced DNA polymerization activity. The invention also relates to the above

compositions in kit format and methods for high fidelity DNA synthesis using the subject compositions of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 48 OF 90 USPATFULL on STN
ACCESSION NUMBER: 2003:231973 USPATFULL
TITLE: Nucleic acid modifying enzymes
INVENTOR(S): Wang, Yan, San Francisco, CA, UNITED STATES
Xi, Lei, Foster City, CA, UNITED STATES
Prosen, Dennis E., Foster City, CA, UNITED STATES
PATENT ASSIGNEE(S): MJ Bioworks Incorporated, South San Francisco, CA, 94080 (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 2003162173 | A1 | 20030828 |
| APPLICATION INFO.: | US 2001-870353 | A1 | 20010530 (9) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 2000-640958, filed on 16 Aug 2000, PENDING | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 2000-207567P | 20000526 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834 | |
| NUMBER OF CLAIMS: | 14 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 3 Drawing Page(s) | |
| LINE COUNT: | 2188 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for an improved generation of novel nucleic acid modifying enzymes. The improvement is the fusion of a sequence-non-specific nucleic-acid-binding domain to the enzyme in a manner that enhances the ability of the enzyme to bind and catalytically modify the nucleic acid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 74 OF 90 USPATFULL on STN
ACCESSION NUMBER: 1999:128415 USPATFULL
TITLE: Purified thermostable nucleic acid polymerase enzyme from *thermosiphon africanus*
INVENTOR(S): Gelfand, David H., Oakland, CA, United States
Greenfield, I. Lawrence, Pleasant Hill, CA, United States
Reichert, Fred L., Oakland, CA, United States
PATENT ASSIGNEE(S): Roche Molecular Systems, Inc., Pleasanton, CA, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|----------------|------|--------------------------|
| PATENT INFORMATION: | US 5968799 | | 19991019 |
| APPLICATION INFO.: | WO 9206202 | | 19920416 |
| RELATED APPLN. INFO.: | US 1993-977428 | | 19930209 (7) |
| DOCUMENT TYPE: | WO 1991-US7076 | | 19910926 |
| FILE SEGMENT: | | | 19930209 PCT 371 date |
| PRIMARY EXAMINER: | | | 19930209 PCT 102(e) date |

Continuation-in-part of Ser. No. US 1990-590490, filed on 28 Sep 1990, now abandoned

LEGAL REPRESENTATIVE: Petry, Douglas A.
NUMBER OF CLAIMS: 2
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 2689
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A purified thermostable enzyme is derived from the eubacterium Thermosiphon africanus. The enzyme has DNA polymerase, activity reverse transcriptase activity, and optionally 5'→3' and/or 3'→5' exonuclease activity. The enzyme can be native or recombinant, and may be used with primers and nucleoside triphosphates in a temperature-cycling chain reaction where at least one nucleic acid sequence is amplified in quantity from an existing sequence.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 78 OF 90 USPATFULL on STN
ACCESSION NUMBER: 1998:88674 USPATFULL
TITLE: Methods of enhancing nucleic acid amplification
INVENTOR(S): Ryder, Thomas B., Escondido, CA, United States
Billyard, Elizabeth R., San Diego, CA, United States
Dattagupta, Nanibhushan, San Diego, CA, United States
PATENT ASSIGNEE(S): Gen-Probe Incorporated, San Diego, CA, United States
(U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 5786183 | | 19980728 |
| APPLICATION INFO.: | US 1995-421471 | | 19950414 (8) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1993-97262, filed on 23 Jul 1993, now abandoned | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Campbell, Eggerton A. | | |
| LEGAL REPRESENTATIVE: | Lyon & Lyon LLP | | |
| NUMBER OF CLAIMS: | 59 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 4 Drawing Figure(s); 4 Drawing Page(s) | | |
| LINE COUNT: | 1503 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for amplification of a nucleic acid strand in a test sample. The method includes contacting the nucleic acid strand from the test sample simultaneously with at least three oligonucleotide primers. At least one primer is a promoter-primer, and at least one other primer is complementary to the nucleic acid strand, and one other primer is complementary to a strand complementary to the nucleic acid strand. The method further includes contacting the nucleic acid strand and primers with one or more proteins having RNA-directed and/or DNA-directed DNA polymerase activities, an RNA polymerase activity, and an RNase H activity under primer-extension conditions to allow amplification of a target region in the nucleic acid strand at essentially constant temperature.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 83 OF 90 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
DUPLICATE
ACCESSION NUMBER: 1996:26034592 BIOTECHNO
TITLE: Exonucleolytic proofreading during replication of repetitive DNA
AUTHOR: Kroutil L.C.; Register K.; Bebenek K.; Kunkel T.A.
CORPORATE SOURCE: Laboratory Molecular Genetics, Natl. Inst. of Envtl. Hlth. Sciences, Research Triangle Park, NC 27709, United States.
SOURCE: Biochemistry, (1996), 35/3 (1046-1053)

CODEN: BICBWA ISSN: 0006-2960
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1996:26034592 BIOTECHNO
AB We are attempting to understand the processes required to accurately replicate the repetitive DNA sequences whose instability is associated with several human diseases. Here we test the hypothesis that the contribution of exonucleolytic proofreading to frameshift fidelity during replication of repetitive DNA sequences diminishes as the number of repeats in the sequence increases. The error rates of proofreading-proficient T7, T4, and *Pyrococcus furiosus* DNA polymerases are compared to their exonuclease-deficient derivatives, for +1 and -1 base errors in homopolymeric repeat sequences of three to eight base pairs. All three exonuclease-deficient polymerases produce frameshift errors during synthesis at rates that increase as a function of run length, suggesting the involvement of misaligned intermediates. Their wild-type counterparts are all much more accurate, suggesting that the majority of the intermediates are corrected by proofreading. However, the contribution of the exonuclease to fidelity decreases substantially as the length of the homopolymeric run increases. For example, the exonuclease enhances the frameshift fidelity of T7 DNA polymerase in a run of three A .midldot. T base pairs by 160-fold, similar to its contribution to base substitution fidelity. However, in a run of eight consecutive A .midldot. T base pairs, the exonuclease only enhances frameshift fidelity by 7-fold. A similar pattern was observed with T4 and Pfu DNA polymerases. Thus, both polymerase selectivity and exonucleolytic proofreading efficiency are diminished during replication of repetitive sequences. This may place an increased relative burden on post-replication repair processes to reduce rates of addition and deletion mutations in organisms whose genome contains abundant simple repeat DNA sequences.

L6 ANSWER 88 OF 90 USPATFULL on STN
ACCESSION NUMBER: 92:34052 USPATFULL
TITLE: Method of using a TAQ DNA polymerase without 5'-3'-exonuclease activity
INVENTOR(S): Burke, Thomas J., Madison, WI, United States
Thompson, David V., Monona, WI, United States
Spurgeon, Sandra L., Madison, WI, United States
PATENT ASSIGNEE(S): Promega Corporation, Madison, WI, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|--|------|--------------|
| PATENT INFORMATION: | US 5108892 | | 19920428 |
| APPLICATION INFO.: | US 1989-389745 | | 19890803 (7) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Wax, Robert A. | | |
| ASSISTANT EXAMINER: | Zitomer, Stephanie W. | | |
| NUMBER OF CLAIMS: | 46 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 3 Drawing Figure(s); 3 Drawing Page(s) | | |
| LINE COUNT: | 1355 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to a modified Taq DNA polymerase and methods for its use.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 95:3105 LIFESCI
TITLE: Amplimers with 3'-terminal phosphorothioate linkages resist degradation by Vent polymerase and reduce Taq polymerase mispriming
AUTHOR: De Noronha, C.M.C.; Mullins, J.I.
CORPORATE SOURCE: Dep. Cancer Biol., Harvard Sch. Pub. Health, Boston, MA 02115, USA
SOURCE: PCR METHODS APPLIC., (1992) vol. 2, no. 2, pp. 131-136.
DOCUMENT TYPE: Journal
FILE SEGMENT: N
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The 3' arrow right 5' exonuclease activity of Vent, a thermostable polymerase from *Thermococcus litoralis*, enhances DNA replication fidelity but also diverts PCR primers (amplimers) from targeted amplification by degrading their 3' termini. We demonstrate that amplimers with a 3-base 3'-terminal mismatch can be efficiently truncated by Vent to prime DNA polymerizations that compete with the specific amplification reaction. However, amplimers with phosphorothioate bonds joining their 3'-terminal residues are resistant to degradation and demonstrate greatly enhanced priming specificity. Slight destabilization of base-pairing by phosphorothioate bond-linked residues also diminishes extension of mispaired 3' ampimer termini in Taq polymerase-mediated amplifications.

=> s 14 (s) (gp32? or gp?)
L7 26 L4 (S) (GP32? OR GP?)

=> dup rem 17
PROCESSING COMPLETED FOR L7
L8 26 DUP REM L7 (0 DUPLICATES REMOVED)

=> d ti 18 1-26

L8 ANSWER 1 OF 26 USPATFULL on STN
TI Methods and apparatus for characterizing polynucleotides

L8 ANSWER 2 OF 26 USPATFULL on STN
TI Nucleic acid encoding *Bacillus stearothermophilus* delta prime polymerase subunit

L8 ANSWER 3 OF 26 USPATFULL on STN
TI Mutant DNA polymerases and uses thereof

L8 ANSWER 4 OF 26 USPATFULL on STN
TI Nucleic acid encoding *Bacillus stearothermophilus* polc polymerase subunit

L8 ANSWER 5 OF 26 USPATFULL on STN
TI Enzymes derived from thermophilic organisms that function as a chromosomal replicase, preparation and use thereof

L8 ANSWER 6 OF 26 USPATFULL on STN
TI Exonuclease-mediated nucleic acid reassembly in directed evolution

L8 ANSWER 7 OF 26 USPATFULL on STN
TI EXONUCLEASE-MEDIATED NUCLEIC ACID REASSEMBLY IN DIRECTED EVOLUTION

L8 ANSWER 8 OF 26 USPATFULL on STN
TI *Chlamydia pneumoniae* polynucleotides and uses thereof

L8 ANSWER 9 OF 26 USPATFULL on STN
TI Nucleic acid and amino acid sequences relating to *Streptococcus*

pneumoniae for diagnostics and therapeutics

- L8 ANSWER 10 OF 26 USPATFULL on STN
TI Antisense modulation of orphan G-protein coupled receptor GPRC5B expression
- L8 ANSWER 11 OF 26 USPATFULL on STN
TI Cloned DNA polymerases from Thermotoga and mutants thereof
- L8 ANSWER 12 OF 26 USPATFULL on STN
TI Nucleic acid encoding 5'-3' exonuclease of bacteriophage RM 378
- L8 ANSWER 13 OF 26 USPATFULL on STN
TI Nucleic acid encoding 3'-5' exonuclease of bacteriophage RM 378
- L8 ANSWER 14 OF 26 USPATFULL on STN
TI Nucleic acid encoding RNA ligase of bacteriophage RM 378
- L8 ANSWER 15 OF 26 USPATFULL on STN
TI Nucleic acid encoding DNA polymerase of bacteriophage RM 378
- L8 ANSWER 16 OF 26 USPATFULL on STN
TI RNA ligase of bacteriophage RM 378
- L8 ANSWER 17 OF 26 USPATFULL on STN
TI Nucleic acid encoding DNA helicase of bacteriophage RM 378
- L8 ANSWER 18 OF 26 USPATFULL on STN
TI Exonuclease-mediated nucleic acid reassembly in directed evolution
- L8 ANSWER 19 OF 26 USPATFULL on STN
TI CLONED DNA POLYMERASES FROM THERMOTOGA MARITIMA AND MUTANTS THEREOF
- L8 ANSWER 20 OF 26 USPATFULL on STN
TI Staphylococcus aureus polynucleotides and sequences
- L8 ANSWER 21 OF 26 USPATFULL on STN
TI Chlamydia pneumoniae polynucleotides and uses thereof
- L8 ANSWER 22 OF 26 USPATFULL on STN
TI Polymerases for analyzing or typing polymorphic nucleic acid fragments and uses thereof
- L8 ANSWER 23 OF 26 USPATFULL on STN
TI Bacteriophage RM 378 of a thermophilic host organism
- L8 ANSWER 24 OF 26 USPATFULL on STN
TI Exonuclease-mediated nucleic acid reassembly in directed evolution
- L8 ANSWER 25 OF 26 USPATFULL on STN
TI Detectably labeled, dual conformation oligonucleotide probes, assays and kits
- L8 ANSWER 26 OF 26 USPATFULL on STN
TI Detectably labeled dual conformation oligonucleotide probes, assays and kits

=> d 18 ibib abs

L8 ANSWER 1 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2006:74125 USPATFULL
TITLE: Methods and apparatus for characterizing polynucleotides
INVENTOR(S): Akeson, Mark, Santa Cruz, CA, UNITED STATES

Branton, Daniel, Lexington, MA, UNITED STATES
Deamer, David W., Santa Cruz, CA, UNITED STATES
Sampson, Jeffrey R., San Francisco, CA, UNITED STATES

| | NUMBER | KIND | DATE |
|---------------------|---------------|------|---------------|
| PATENT INFORMATION: | US 2006063171 | A1 | 20060323 |
| APPLICATION INFO.: | US 2005-88140 | A1 | 20050323 (11) |

| | NUMBER | DATE |
|-----------------------|---|---------------|
| PRIORITY INFORMATION: | US 2004-555665P | 20040323 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | CLARK & ELBING LLP, 101 FEDERAL STREET, BOSTON, MA, 02110, US | |
| NUMBER OF CLAIMS: | 20 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 14 Drawing Page(s) | |
| LINE COUNT: | 1239 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Systems and methods for analysis of polymers, e.g., polynucleotides, are provided. The systems are capable of analyzing a polymer at a specified rate. One such analysis system includes a structure having a nanopore aperture and a molecular motor, e.g., a polymerase, adjacent the nanopore aperture.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d 18 1-26 ibib abs

L8 ANSWER 1 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2006:74125 USPATFULL
TITLE: Methods and apparatus for characterizing polynucleotides
INVENTOR(S): Akeson, Mark, Santa Cruz, CA, UNITED STATES
Branton, Daniel, Lexington, MA, UNITED STATES
Deamer, David W., Santa Cruz, CA, UNITED STATES
Sampson, Jeffrey R., San Francisco, CA, UNITED STATES

| | NUMBER | KIND | DATE |
|---------------------|---------------|------|---------------|
| PATENT INFORMATION: | US 2006063171 | A1 | 20060323 |
| APPLICATION INFO.: | US 2005-88140 | A1 | 20050323 (11) |

| | NUMBER | DATE |
|-----------------------|---|---------------|
| PRIORITY INFORMATION: | US 2004-555665P | 20040323 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | CLARK & ELBING LLP, 101 FEDERAL STREET, BOSTON, MA, 02110, US | |
| NUMBER OF CLAIMS: | 20 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 14 Drawing Page(s) | |
| LINE COUNT: | 1239 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Systems and methods for analysis of polymers, e.g., polynucleotides, are provided. The systems are capable of analyzing a polymer at a specified rate. One such analysis system includes a structure having a nanopore aperture and a molecular motor, e.g., a polymerase, adjacent the nanopore aperture.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 2 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:177219 USPATFULL
TITLE: Nucleic acid encoding *Bacillus stearothermophilus* delta prime polymerase subunit
INVENTOR(S): O'Donnell, Michael E., Hastings-on-Hudson, NY, UNITED STATES
Yuzhakov, Alexander, Malden, MA, UNITED STATES
Yurieva, Olga, New York, NY, UNITED STATES
Jeruzalmi, David, Cambridge, MA, UNITED STATES
Bruck, Irina, New York, NY, UNITED STATES
Kuriyan, John, Berkeley, CA, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2005153299 | A1 | 20050714 |
| APPLICATION INFO.: | US 2003-671106 | A1 | 20030925 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2000-716964, filed on 21 Nov 2000, GRANTED, Pat. No. US 6897053
Continuation-in-part of Ser. No. US 2000-642218, filed on 18 Aug 2000, PENDING Continuation of Ser. No. US 1998-57416, filed on 8 Apr 1998, ABANDONED | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1997-43202P | 19970408 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | Nixon Peabody LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603-1051, US | |
| NUMBER OF CLAIMS: | 9 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 83 Drawing Page(s) | |
| LINE COUNT: | 9358 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to an isolated DNA molecule from a thermophilic bacterium which encodes a DNA polymerase III-type enzyme subunit. Also encompassed by the present invention are host cells and expression system including the heterologous DNA molecule of the present invention, as well as isolated replication enzyme subunits encoded by such DNA molecules. Also disclosed is a method of producing a recombinant thermostable DNA polymerase III-type enzyme, or subunit thereof, from a thermophilic bacterium, which is carried out by transforming a host cell with at least one heterologous DNA molecule of the present invention under conditions suitable for expression of the DNA polymerase III-type enzyme, or subunit thereof, and then isolating the DNA polymerase III-type enzyme, or subunit thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 3 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:131177 USPATFULL
TITLE: Mutant DNA polymerases and uses thereof
INVENTOR(S): Chatterjee, Deb K., North Potomac, MD, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2005112637 | A1 | 20050526 |
| APPLICATION INFO.: | US 2004-947352 | A1 | 20040923 (10) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2000-558421, filed on 26 Apr 2000, PENDING Continuation of Ser. No. US 1995-576759, filed on 21 Dec 1995, ABANDONED Continuation of Ser. No. US 1995-537397, filed on 2 Oct 1995, ABANDONED Continuation-in-part of Ser. No. US 1995-525057, filed on 8 Sep 1995, ABANDONED | | |

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., WASHINGTON, DC, 20005, US
NUMBER OF CLAIMS: 28
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Page(s)
LINE COUNT: 1367
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to mutant DNA polymerases which incorporate dideoxynucleotides with about the same efficiency as deoxynucleotides. The present invention also related to mutant DNA polymerases which also have substantially reduced 5'-to-3' exonuclease activity or 3'-to-5' exonuclease activity. The invention also relates to DNA molecules coding for the mutant DNA polymerases, and hosts containing the DNA molecules.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 4 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:117653 USPATFULL
TITLE: Nucleic acid encoding *Bacillus stearothermophilus* polc polymerase subunit
INVENTOR(S): O'Donnell, Michael E., Hastings-on-Hudson, NY, UNITED STATES
Yuzhakov, Alexander, Malden, MA, UNITED STATES
Yurieva, Olga, New York, NY, UNITED STATES
Jeruzalmi, David, Cambridge, MA, UNITED STATES
Bruck, Irina, New York, NY, UNITED STATES
Kuriyan, John, Berkeley, CA, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2005100920 | A1 | 20050512 |
| APPLICATION INFO.: | US 2003-671412 | A1 | 20030925 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2000-716964, filed on 21 Nov 2000, PENDING Continuation-in-part of Ser. No. US 2000-642218, filed on 18 Aug 2000, PENDING Continuation of Ser. No. US 1998-57416, filed on 8 Apr 1998, ABANDONED | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1997-43202P | 19970408 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | Nixon Peabody LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603-1051, US | |
| NUMBER OF CLAIMS: | 9 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 82 Drawing Page(s) | |
| LINE COUNT: | 9351 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to an isolated DNA molecule from a thermophilic bacterium which encodes a DNA polymerase III-type enzyme subunit. Also encompassed by the present invention are host cells and expression system including the heterologous DNA molecule of the present invention, as well as isolated replication enzyme subunits encoded by such DNA molecules. Also disclosed is a method of producing a recombinant thermostable DNA polymerase III-type enzyme, or subunit thereof, from a thermophilic bacterium, which is carried out by transforming a host cell with at least one heterologous DNA molecule of the present invention under conditions suitable for expression of the DNA polymerase III-type enzyme, or subunit thereof, and then isolating the DNA polymerase III-type enzyme, or subunit thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 5 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2005:126986 USPATFULL
TITLE: Enzymes derived from thermophilic organisms that function as a chromosomal replicase, preparation and use thereof
INVENTOR(S): O'Donnell, Michael E., Hastings-on-Hudson, NY, UNITED STATES
Yurieva, Olga, New York, NY, UNITED STATES
PATENT ASSIGNEE(S): Rockefeller University, New York, NY, UNITED STATES (U.S. corporation)

| PATENT INFORMATION: | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| | US 6897053 | B1 | 20050524 |
| APPLICATION INFO.: | US 2000-716964 | | 20001121 (9) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 2000-642218, filed on 18 Aug 2000, PENDING Continuation of Ser. No. US 1998-57416, filed on 8 Apr 1998, ABANDONED | | |

| PRIORITY INFORMATION: | NUMBER | DATE |
|-----------------------|---|---------------|
| | US 1997-43202P | 19970408 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Hutson, Richard | |
| LEGAL REPRESENTATIVE: | Nixon Peabody LLP | |
| NUMBER OF CLAIMS: | 6 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 124 Drawing Figure(s); 82 Drawing Page(s) | |
| LINE COUNT: | 9308 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to an isolated DNA molecule from a thermophilic bacterium which encodes a DNA polymerase III-type enzyme subunit. Also encompassed by the present invention are host cells and expression system including the heterologous DNA molecule of the present invention, as well as isolated replication enzyme subunits encoded by such DNA molecules. Also disclosed is a method of producing a recombinant thermostable DNA polymerase III-type enzyme, or subunit thereof, from a thermophilic bacterium, which is carried out by transforming a host cell with at least one heterologous DNA molecule of the present invention under conditions suitable for expression of the DNA polymerase III-type enzyme, or subunit thereof, and then isolating the DNA polymerase III-type enzyme, or subunit thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 6 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2004:314472 USPATFULL
TITLE: Exonuclease-mediated nucleic acid reassembly in directed evolution
INVENTOR(S): Short, Jay M., Rancho Santa Fe, CA, UNITED STATES

| PATENT INFORMATION: | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| | US 2004248143 | A1 | 20041209 |
| APPLICATION INFO.: | US 2003-631544 | A1 | 20030730 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2002-108077, filed on 26 Mar 2002, GRANTED, Pat. No. US 6635449 Continuation of Ser. No. US 2000-535754, filed on 27 Mar 2000, GRANTED, Pat. No. US 6361974 Continuation-in-part of Ser. No. US 2000-522289, filed on 9 Mar 2000, GRANTED, Pat. No. US 6358709 Continuation-in-part of Ser. No. US | | |

2000-498557, filed on 4 Feb 2000, GRANTED, Pat. No. US
6713279 Continuation-in-part of Ser. No. US
2000-495052, filed on 31 Jan 2000, GRANTED, Pat. No. US
6479258 Continuation-in-part of Ser. No. US
1999-332835, filed on 14 Jun 1999, GRANTED, Pat. No. US
6537776 Continuation-in-part of Ser. No. US
1999-276860, filed on 26 Mar 1999, GRANTED, Pat. No. US
6352842 Continuation-in-part of Ser. No. US
1999-267118, filed on 9 Mar 1999, GRANTED, Pat. No. US
6238884 Continuation-in-part of Ser. No. US
1999-246178, filed on 4 Feb 1999, GRANTED, Pat. No. US
6171820 Continuation-in-part of Ser. No. US
1998-185373, filed on 3 Nov 1998, GRANTED, Pat. No. US
6335179 Continuation of Ser. No. US 1996-760489, filed
on 5 Dec 1996, GRANTED, Pat. No. US 5830696
Continuation-in-part of Ser. No. US 1997-962504, filed
on 31 Oct 1997, GRANTED, Pat. No. US 6489145
Continuation-in-part of Ser. No. US 1996-677112, filed
on 9 Jul 1996, GRANTED, Pat. No. US 5965408
Continuation-in-part of Ser. No. US 1996-651568, filed
on 22 May 1996, GRANTED, Pat. No. US 5939250

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1995-8311P | 19951207 (60) |
| | US 1995-8316P | 19951207 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | DIVERSA CORPORATION, 4955 DIRECTORS PLACE, SAN DIEGO,
CA, 92121 | |
| NUMBER OF CLAIMS: | 40 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 6 Drawing Page(s) | |
| LINE COUNT: | 9060 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides methods of obtaining novel polynucleotides and encoded polypeptides by the use of non-stochastic methods of directed evolution (DirectEvolution.TM.). A particular advantage of exonuclease-mediated reassembly methods is the ability to reassemble nucleic acid strands that would otherwise be problematic to chimerize. Exonuclease-mediated reassembly methods can be used in combination with other mutagenesis methods provided herein. These methods include non-stochastic polynucleotide site-saturation mutagenesis (Gene Site Saturation Mutagenesis.TM.) and non-stochastic polynucleotide reassembly (GeneReassembly.TM.). This invention provides methods of obtaining novel enzymes that have optimized physical &/or biological properties. Through use of the claimed methods, genetic vaccines, enzymes, small molecules, and other desirable molecules can be evolved towards desirable properties. For example, vaccine vectors can be obtained that exhibit increased efficacy for use as genetic vaccines. Vectors obtained by using the methods can have, for example, enhanced antigen expression, increased uptake into a cell, increased stability in a cell, ability to tailor an immune response, and the like. Furthermore, this invention provides methods of obtaining a variety of novel biologically active molecules, in the fields of antibiotics, pharmacotherapeutics, and transgenic traits.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 7 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2004:196772 USPATFULL
TITLE: EXONUCLEASE-MEDIATED NUCLEIC ACID REASSEMBLY IN
DIRECTED EVOLUTION
INVENTOR(S): Short, Jay M., Rancho Santa Fe, CA, UNITED STATES
Djavakhishvili, Tsotne David, San Diego, CA, UNITED

STATES
Frey, Gerhard Johann, San Diego, CA, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2004152077 | A1 | 20040805 |
| | US 6939689 | B2 | 20050906 |
| APPLICATION INFO.: | US 2001-29221 | A1 | 20011221 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2000-535754, filed on 27 Mar 2000, GRANTED, Pat. No. US 6361974 | | |
| | Continuation-in-part of Ser. No. US 2000-522289, filed on 9 Mar 2000, GRANTED, Pat. No. US 6358709 | | |
| | Continuation-in-part of Ser. No. US 2000-498557, filed on 4 Feb 2000, GRANTED, Pat. No. US 6713279 | | |
| | Continuation-in-part of Ser. No. US 2000-495052, filed on 31 Jan 2000, GRANTED, Pat. No. US 6479258 | | |
| | Continuation-in-part of Ser. No. US 1999-332835, filed on 14 Jun 1999, GRANTED, Pat. No. US 6537776 | | |
| | Continuation-in-part of Ser. No. US 1999-276860, filed on 26 Mar 1999, GRANTED, Pat. No. US 6352842 | | |
| | Continuation-in-part of Ser. No. US 1999-267118, filed on 9 Mar 1999, GRANTED, Pat. No. US 6238884 | | |
| | Continuation-in-part of Ser. No. US 1999-246178, filed on 4 Feb 1999, GRANTED, Pat. No. US 6171820 | | |
| | Continuation-in-part of Ser. No. US 1998-185373, filed on 3 Nov 1998, GRANTED, Pat. No. US 6335179 | | |
| | Continuation of Ser. No. US 1996-760489, filed on 5 Dec 1996, GRANTED, Pat. No. US 5830696 | | |

| | NUMBER | DATE |
|-----------------------|---|---------------|
| PRIORITY INFORMATION: | US 1995-8311P | 19951207 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | DIVERSA CORPORATION, 4955 DIRECTORS PLACE, SAN DIEGO, CA, 92121 | |

NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 8934

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides methods of obtaining novel polynucleotides and encoded polypeptides by the use of non-stochastic methods of directed evolution (DirectEvolution.TM.). A particular advantage of exonuclease-mediated reassembly methods is the ability to reassemble nucleic acid strands that would otherwise be problematic to chimerize. Exonuclease-mediated reassembly methods can be used in combination with other mutagenesis methods provided herein. These methods include non-stochastic polynucleotide site-saturation mutagenesis (Gene Site Saturation Mutagenesis.TM.) and non-stochastic polynucleotide reassembly (GeneReassembly.TM.). This invention provides methods of obtaining novel enzymes that have optimized physical &/or biological properties. Through use of the claimed methods, genetic vaccines, enzymes, small molecules, and other desirable molecules can be evolved towards desirable properties. For example, vaccine vectors can be obtained that exhibit increased efficacy for use as genetic vaccines. Vectors obtained by using the methods can have, for example, enhanced antigen expression, increased uptake into a cell, increased stability in a cell, ability to tailor an immune response, and the like. Furthermore, this invention provides methods of obtaining a variety of novel biologically active molecules, in the fields of antibiotics, pharmacotherapeutics, and transgenic traits.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 8 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2004:7978 USPATFULL
TITLE: Chlamydia pneumoniae polynucleotides and uses thereof
INVENTOR(S): Griffais, Remy, Montrouge, FRANCE
Hoiseth, Susan K., Fairport, NY, UNITED STATES
Zagursky, Robert John, Victor, NY, UNITED STATES
Metcalf, Benjamin J., Rochester, NY, UNITED STATES
Peek, Joel A., Pittsford, NY, UNITED STATES
Sankaran, Banumathi, Penfield, NY, UNITED STATES
Fletcher, Leah Diane, Geneseo, NY, UNITED STATES
Genset S.A., Paris, FRANCE (non-U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2004006218 | A1 | 20040108 |
| APPLICATION INFO.: | US 2002-289762 | A1 | 20021107 (10) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 1998-198452, filed on 23 Nov 1998, GRANTED, Pat. No. US 6559294 | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | FR 1997-14673 | 19971121 |
| | US 1998-107078P | 19981104 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | Frank C. Eisenschenk, Ph.D., Saliwanchik, Lloyd & Saliwanchik,, A Professional Association, 2421 N.W. 41st Street, Suite A-1, Gainesville, FL, 32606 | |

NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 13481

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The subject of the invention is the genomic sequence and the nucleotide sequences encoding polypeptides of Chlamydia pneumoniae, such as cellular envelope polypeptides, which are secreted or specific, or which are involved in metabolism, in the replication process or in virulence, polypeptides encoded by such sequences, as well as vectors including the said sequences and cells or animals transformed with these vectors. The invention also relates to transcriptional gene products of the Chlamydia pneumoniae genome, such as, for example, antisense and ribozyme molecules, which can be used to control growth of the microorganism. The invention also relates to methods of detecting these nucleic acids or polypeptides and kits for diagnosing Chlamydia pneumoniae infection. The invention also relates to a method of selecting compounds capable of modulating bacterial infection and a method for the biosynthesis or biodegradation of molecules of interest using the said nucleotide sequences or the said polypeptides. The invention finally comprises, pharmaceutical, in particular vaccine, compositions for the prevention and/or treatment of bacterial, in particular Chlamydia pneumoniae, infections.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 9 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2004:250212 USPATFULL
TITLE: Nucleic acid and amino acid sequences relating to Streptococcus pneumoniae for diagnostics and therapeutics
INVENTOR(S): Doucette-Stamm, Lynn A., Framingham, MA, United States
Bush, David, Somerville, MA, United States
PATENT ASSIGNEE(S): Genome Therapeutics Corporation, Waltham, MA, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|--|--------|------|------|
|--|--------|------|------|

PATENT INFORMATION: US 6800744 B1 20041005
APPLICATION INFO.: US 1998-107433 19980630 (9)

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1998-85131P | 19980512 (60) |
| | US 1997-51553P | 19970702 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Brusca, John S. | |
| ASSISTANT EXAMINER: | Zhou, Shubo "Joe " | |
| LEGAL REPRESENTATIVE: | Genome Therapeutics Corporation | |
| NUMBER OF CLAIMS: | 14 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 0 Drawing Figure(s); 0 Drawing Page(s) | |
| LINE COUNT: | 11545 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides isolated polypeptide and nucleic acid sequences derived from *Streptococcus pneumonia* that are useful in diagnosis and therapy of pathological conditions; antibodies against the polypeptides; and methods for the production of the polypeptides. The invention also provides methods for the detection, prevention and treatment of pathological conditions resulting from bacterial infection.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 10 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2003:335036 USPATFULL
TITLE: Antisense modulation of orphan G-protein coupled receptor GPRC5B expression
INVENTOR(S): Monia, Brett P., Encinitas, CA, UNITED STATES
Dobie, Kenneth W., Del Mar, CA, UNITED STATES
PATENT ASSIGNEE(S): Isis Pharmaceuticals Inc. (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2003235912 | A1 | 20031225 |
| APPLICATION INFO.: | US 2002-177798 | A1 | 20020619 (10) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | FENWICK & WEST LLP, 801 CALIFORNIA STREET, MOUNTAIN VIEW, CA, 94014 | | |
| NUMBER OF CLAIMS: | 20 | | |
| EXEMPLARY CLAIM: | 1 | | |
| LINE COUNT: | 3689 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Antisense compounds, compositions and methods are provided for modulating the expression of orphan G-protein coupled receptor GPRC5B. The compositions comprise antisense compounds, particularly antisense oligonucleotides, targeted to nucleic acids encoding orphan G-protein coupled receptor GPRC5B. Methods of using these compounds for modulation of orphan G-protein coupled receptor GPRC5B expression and for treatment of diseases associated with expression of orphan G-protein coupled receptor GPRC5B are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 11 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2003:232001 USPATFULL
TITLE: Cloned DNA polymerases from *Thermotoga* and mutants thereof
INVENTOR(S): Chatterjee, Deb K., North Potomac, MD, UNITED STATES
Hughes, A. John, JR., Germantown, MD, UNITED STATES
PATENT ASSIGNEE(S): Invitrogen Corporation (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2003162201 | A1 | 20030828 |
| APPLICATION INFO.: | US 2002-285696 | A1 | 20021101 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1999-238471, filed on 28 Jan 1999, GRANTED, Pat. No. US 6506560 Division of Ser. No. US 1996-706706, filed on 6 Sep 1996, GRANTED, Pat. No. US 6015668 Continuation-in-part of Ser. No. US 1996-689818, filed on 14 Aug 1996, ABANDONED Continuation-in-part of Ser. No. US 1995-537400, filed on 2 Oct 1995, GRANTED, Pat. No. US 5939301 Continuation-in-part of Ser. No. US 1995-370190, filed on 9 Jan 1995, GRANTED, Pat. No. US 5912155 Continuation-in-part of Ser. No. US 1994-316423, filed on 30 Sep 1994, ABANDONED Continuation of Ser. No. US 1995-537397, filed on 2 Oct 1995, ABANDONED Continuation-in-part of Ser. No. US 1995-525057, filed on 8 Sep 1995, ABANDONED | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., WASHINGTON, DC, 20005 | | |
| NUMBER OF CLAIMS: | 39 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 30 Drawing Page(s) | | |
| LINE COUNT: | 2684 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a substantially pure thermostable DNA polymerase from Thermotoga (Tne and Tma) and mutants thereof. The Tne DNA polymerase has a molecular weight of about 100 kilodaltons and is more thermostable than Taq DNA polymerase. The mutant DNA polymerase has at least one mutation selected from the group consisting of (1) a first mutation that substantially reduces or eliminates 3'→5' exonuclease activity of said DNA polymerase; (2) a second mutation that substantially reduces or eliminates 5'→3' exonuclease activity of said DNA polymerase; (3) a third mutation in the O helix of said DNA polymerase resulting in said DNA polymerase becoming non-discriminating against dideoxynucleotides. The present invention also relates to the cloning and expression of the wild type or mutant DNA polymerases in E. coli, to DNA molecules containing the cloned gene, and to host cells which express said genes. The DNA polymerases of the invention may be used in well-known DNA sequencing and amplification reactions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

| | | |
|---------------------|--|--------|
| L8 ANSWER 12 OF 26 | USPATFULL | on STN |
| ACCESSION NUMBER: | 2003:187937 USPATFULL | |
| TITLE: | Nucleic acid encoding 5'-3' exonuclease of bacteriophage RM 378 | |
| INVENTOR(S): | Hjorleifsdottir, Sigridur, Reykjavik, ICELAND
Hreggvidsson, Gudmundur O., Reykjavik, ICELAND
Fridjonsson, Olafur H., Reykjavik, ICELAND
Aevarsson, Arnthor, Hveragerdi, ICELAND
Kristjansson, Jakob K., Reykjavik, ICELAND | |
| PATENT ASSIGNEE(S): | Prokaria ltd., Reykjavik, ICELAND (non-U.S. corporation) | |

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2003129727 | A1 | 20030710 |
| APPLICATION INFO.: | US 2002-270846 | A1 | 20021011 (10) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2000-585858, filed on 1 Jun 2000, GRANTED, Pat. No. US 6492161 | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1999-137120P | 19990602 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133 | |
| NUMBER OF CLAIMS: | 10 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 83 Drawing Page(s) | |
| LINE COUNT: | 8993 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel bacteriophage RM 378 of *Rhodothermus marinus*, the nucleic acids of its genome, nucleic acids comprising nucleotide sequences of open reading frames (ORFs) of its genome, and polypeptides encoded by the nucleic acids, are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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|---------------------|--|--------|
| L8 ANSWER 13 OF 26 | USPATFULL | on STN |
| ACCESSION NUMBER: | 2003:134049 USPATFULL | |
| TITLE: | Nucleic acid encoding 3'-5' exonuclease of bacteriophage RM 378 | |
| INVENTOR(S): | Hjorleifsdottir, Sigridur, Reykjavik, ICELAND
Hreggvidsson, Gudmundur O., Reykjavik, ICELAND
Fridjonsson, Olafur H., Reykjavik, ICELAND
Aevarsson, Arnthor, Hveragerdi, ICELAND
Kristjansson, Jakob K., Reykjavik, ICELAND | |
| PATENT ASSIGNEE(S): | Prokaria ltd., Reykjavik, ICELAND (non-U.S. corporation) | |

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2003092134 | A1 | 20030515 |
| APPLICATION INFO.: | US 2002-270859 | A1 | 20021011 (10) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2000-585858, filed on 1 Jun 2000, GRANTED, Pat. No. US 6492161 | | |

| | | |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1999-137120P | 19990602 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133 | |
| NUMBER OF CLAIMS: | 11 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 83 Drawing Page(s) | |
| LINE COUNT: | 9001 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel bacteriophage RM 378 of *Rhodothermus marinus*, the nucleic acids of its genome, nucleic acids comprising nucleotide sequences of open reading frames (ORFs) of its genome, and polypeptides encoded by the nucleic acids, are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

| | | |
|--------------------|--|--------|
| L8 ANSWER 14 OF 26 | USPATFULL | on STN |
| ACCESSION NUMBER: | 2003:134043 USPATFULL | |
| TITLE: | Nucleic acid encoding RNA ligase of bacteriophage RM 378 | |
| INVENTOR(S): | Hjorleifsdottir, Sigridur, Reykjavik, ICELAND
Hreggvidsson, Gudmundur O., Reykjavik, ICELAND
Fridjonsson, Olafur H., Reykjavik, ICELAND
Aevarsson, Arnthor, Hveragerdi, ICELAND | |

PATENT ASSIGNEE(S) : Kristjansson, Jakob K., Reykjavik, ICELAND
Prokaria ltd., Reykjavik, ICELAND (non-U.S.
corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2003092128 | A1 | 20030515 |
| APPLICATION INFO.: | US 2002-270710 | A1 | 20021011 (10) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2000-585858, filed on 1 Jun
2000, GRANTED, Pat. No. US 6492161 | | |

| | NUMBER | DATE |
|-----------------------|---|---------------|
| PRIORITY INFORMATION: | US 1999-137120P | 19990602 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA
ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133 | |
| NUMBER OF CLAIMS: | 10 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 83 Drawing Page(s) | |
| LINE COUNT: | 9038 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel bacteriophage RM 378 of *Rhodothermus marinus*, the nucleic acids of its genome, nucleic acids comprising nucleotide sequences of open reading frames (ORFs) of its genome, and polypeptides encoded by the nucleic acids, are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 15 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2003:127179 USPATFULL
TITLE: Nucleic acid encoding DNA polymerase of bacteriophage
RM 378
INVENTOR(S) : Hjorleifsdottir, Sigridur, Reykjavik, ICELAND
Hreggvidsson, Guðmundur O., Reykjavik, ICELAND
Fridjonsson, Olafur H., Reykjavik, ICELAND
Aevarsson, Arnthor, Hveragerdi, ICELAND
Kristjansson, Jakob K., Reykjavik, ICELAND
Prokaria Ltd., Reykjavik, ICELAND (non-U.S.
corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2003087392 | A1 | 20030508 |
| APPLICATION INFO.: | US 2002-270786 | A1 | 20021011 (10) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2000-585858, filed on 1 Jun
2000, GRANTED, Pat. No. US 6492161 | | |

| | NUMBER | DATE |
|-----------------------|---|---------------|
| PRIORITY INFORMATION: | US 1999-137120P | 19990602 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA
ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133 | |
| NUMBER OF CLAIMS: | 10 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 83 Drawing Page(s) | |
| LINE COUNT: | 9015 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel bacteriophage RM 378 of *Rhodothermus marinus*, the nucleic acids of its genome, nucleic acids comprising nucleotide sequences of open reading frames (ORFs) of its genome, and polypeptides encoded by the nucleic acids, are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 16 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2003:120309 USPATFULL
TITLE: RNA ligase of bacteriophage RM 378
INVENTOR(S): Hjorleifsdottir, Sigridur, Reykjavik, ICELAND
Hreggvidsson, Guðmundur O., Reykjavik, ICELAND
Fridjonsson, Olafur H., Reykjavik, ICELAND
Aevarsson, Arnþor, Hveragerði, ICELAND
Kristjansson, Jakob K., Reykjavik, ICELAND
PATENT ASSIGNEE(S): Prokaria Ltd., Reykjavik, ICELAND (non-U.S.
corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2003082790 | A1 | 20030501 |
| | US 6818425 | B2 | 20041116 |
| APPLICATION INFO.: | US 2002-270878 | A1 | 20021011 (10) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2000-585858, filed on 1 Jun
2000, GRANTED, Pat. No. US 6492161 | | |

| | NUMBER | DATE |
|-----------------------|---|---------------|
| PRIORITY INFORMATION: | US 1999-137120P | 19990602 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA
ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133 | |
| NUMBER OF CLAIMS: | 4 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 83 Drawing Page(s) | |
| LINE COUNT: | 9115 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel bacteriophage RM 378 of *Rhodothermus marinus*, the nucleic acids of its genome, nucleic acids comprising nucleotide sequences of open reading frames (ORFs) of its genome, and polypeptides encoded by the nucleic acids, are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 17 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2003:120260 USPATFULL
TITLE: Nucleic acid encoding DNA helicase of bacteriophage RM
378
INVENTOR(S): Hjorleifsdottir, Sigridur, Reykjavik, ICELAND
Hreggvidsson, Guðmundur O., Reykjavik, ICELAND
Fridjonsson, Olafur H., Reykjavik, ICELAND
Aevarsson, Arnþor, Hveragerði, ICELAND
Kristjansson, Jakob K., Reykjavik, ICELAND
PATENT ASSIGNEE(S): Prokaria Ltd., Reykjavik, ICELAND (non-U.S.
corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2003082741 | A1 | 20030501 |
| APPLICATION INFO.: | US 2002-270875 | A1 | 20021011 (10) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2000-585858, filed on 1 Jun
2000, GRANTED, Pat. No. US 6492161 | | |

| | NUMBER | DATE |
|-----------------------|-----------------|---------------|
| PRIORITY INFORMATION: | US 1999-137120P | 19990602 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |

LEGAL REPRESENTATIVE: HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 83 Drawing Page(s)
LINE COUNT: 9016

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel bacteriophage RM 378 of *Rhodothermus marinus*, the nucleic acids of its genome, nucleic acids comprising nucleotide sequences of open reading frames (ORFs) of its genome, and polypeptides encoded by the nucleic acids, are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 18 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2003:51159 USPATFULL
TITLE: Exonuclease-mediated nucleic acid reassembly in directed evolution
INVENTOR(S): Short, Jay M., Rancho Santa Fe, CA, UNITED STATES
PATENT ASSIGNEE(S): Diversa Corporation (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2003036116 | A1 | 20030220 |
| | US 6635449 | B2 | 20031021 |
| APPLICATION INFO.: | US 2002-108077 | A1 | 20020326 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2000-535754, filed on 27 Mar 2000, GRANTED, Pat. No. US 6361974 | | |
| | Continuation-in-part of Ser. No. US 2000-522289, filed on 9 Mar 2000, GRANTED, Pat. No. US 6358709 | | |
| | Continuation-in-part of Ser. No. US 2000-498557, filed on 4 Feb 2000, PENDING Continuation-in-part of Ser. No. US 2000-495052, filed on 31 Jan 2000, PENDING | | |
| | Continuation-in-part of Ser. No. US 1999-332835, filed on 14 Jun 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-276860, filed on 26 Mar 1999, GRANTED, Pat. No. US 6352842 Continuation-in-part of Ser. No. US 1999-267118, filed on 9 Mar 1999, GRANTED, Pat. No. US 6238884 Continuation-in-part of Ser. No. US 1999-246178, filed on 4 Feb 1999, GRANTED, Pat. No. US 6171820 Continuation-in-part of Ser. No. US 1998-185373, filed on 3 Nov 1998, GRANTED, Pat. No. US 6335179 Continuation of Ser. No. US 1996-760489, filed on 5 Dec 1996, GRANTED, Pat. No. US 5830696 Continuation-in-part of Ser. No. US 1996-677112, filed on 9 Jul 1996, GRANTED, Pat. No. US 5965408 | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1995-8311P | 19951207 (60) |
| | US 1995-8316P | 19951207 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | JANE M. LOVE, PH.D., HALE AND DORR LLP, 300 PARK AVENUE, NEW YORK, NY, 10022 | |
| NUMBER OF CLAIMS: | 1 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 6 Drawing Page(s) | |
| LINE COUNT: | 8979 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides methods of obtaining novel polynucleotides and encoded polypeptides by the use of non-stochastic methods of directed evolution (DirectEvolution.TM.). A particular advantage of exonuclease-mediated reassembly methods is the ability to reassemble nucleic acid strands that would otherwise be problematic to chimerize.

Exonuclease-mediated reassembly methods can be used in combination with other mutagenesis methods provided herein. These methods include non-stochastic polynucleotide site-saturation mutagenesis (Gene Site Saturation Mutagenesis.TM.) and non-stochastic polynucleotide reassembly (GeneReassembly.TM.). This invention provides methods of obtaining novel enzymes that have optimized physical &/or biological properties. Through use of the claimed methods, genetic vaccines, enzymes, small molecules, and other desirable molecules can be evolved towards desirable properties. For example, vaccine vectors can be obtained that exhibit increased efficacy for use as genetic vaccines. Vectors obtained by using the methods can have, for example, enhanced antigen expression, increased uptake into a cell, increased stability in a cell, ability to tailor an immune response, and the like. Furthermore, this invention provides methods of obtaining a variety of novel biologically active molecules, in the fields of antibiotics, pharmacotherapeutics, and transgenic traits.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 19 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2003:37651 USPATFULL
TITLE: CLONED DNA POLYMERASES FROM THERMOTOGA MARITIMA AND
MUTANTS THEREOF
INVENTOR(S): CHATTERJEE, DEB K., N POTOMAC, MD, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 2003027296 | A1 | 20030206 |
| APPLICATION INFO.: | US 1999-229173 | A1 | 19990113 (9) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 1996-706702, filed on 6 Sep 1996, GRANTED, Pat. No. US 5948614 Continuation-in-part of Ser. No. US 1996-689807, filed on 14 Aug 1996, ABANDONED Continuation-in-part of Ser. No. US 1995-537400, filed on 2 Oct 1995, GRANTED, Pat. No. US 5939301 Continuation of Ser. No. US 1995-537397, filed on 2 Oct 1995, ABANDONED Continuation-in-part of Ser. No. US 1995-525057, filed on 8 Sep 1995, ABANDONED | | |

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: STERNE KESSLER GOLDSTEIN & FOX, 1100 NEW YORK AVENUE NW, SUITE 600, WASHINGTON, DC, 200053934
NUMBER OF CLAIMS: 35
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 30 Drawing Page(s)
LINE COUNT: 2761

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a substantially pure thermostable DNA polymerase from Thermotoga (Tne and Tma) and mutants thereof. The Tne DNA polymerase has a molecular weight of about 100 kilodaltons and is more thermostable than Taq DNA polymerase. The mutant DNA polymerase has at least one mutation selected from the group consisting of (1) a first mutation that substantially reduces or eliminates 3'→5' exonuclease activity of said DNA polymerase; (2) a second mutation that substantially reduces or eliminates 5'→3' exonuclease activity of said DNA polymerase; (3) a third mutation in the O helix of said DNA polymerase resulting in said DNA polymerase becoming non-discriminating against dideoxynucleotides. The present invention also relates to the cloning and expression of the wild type or mutant DNA polymerases in E. coli, to DNA molecules containing the cloned gene, and to host cells which express said genes. The DNA polymerases of the invention may be used in well-known DNA sequencing and amplification reactions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 20 OF 26 USPATFULL on STN

ACCESSION NUMBER: 2003:190673 USPATFULL
TITLE: *Staphylococcus aureus* polynucleotides and sequences
INVENTOR(S): Kunsch, Charles A., Norcross, GA, United States
Choi, Gil H., Rockville, MD, United States
Barash, Steven, Rockville, MD, United States
Dillon, Patrick J., Carlsbad, CA, United States
Fannon, Michael R., Silver Spring, MD, United States
Rosen, Craig A., Laytonsville, MD, United States
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 6593114 | B1 | 20030715 |
| APPLICATION INFO.: | US 1997-956171 | | 19971020 (8) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 1997-781986, filed on 3 Jan 1997 | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1996-9861P | 19960105 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Duffy, Patricia A. | |
| LEGAL REPRESENTATIVE: | Human Genome Sciences, Inc. | |
| NUMBER OF CLAIMS: | 15 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 2 Drawing Figure(s); 2 Drawing Page(s) | |
| LINE COUNT: | 7835 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides polynucleotide sequences of the genome of *Staphylococcus aureus*, polypeptide sequences encoded by the polynucleotide sequences, corresponding polynucleotides and polypeptides, vectors and hosts comprising the polynucleotides, and assays and other uses thereof. The present invention further provides polynucleotide and polypeptide sequence information stored on computer readable media, and computer-based systems and methods which facilitate its use.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 21 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2003:123418 USPATFULL
TITLE: *Chlamydia pneumoniae* polynucleotides and uses thereof
INVENTOR(S): Griffais, Remy, Momtrouge, FRANCE
Hoiseth, Susan K., Fairport, NY, United States
Zagursky, Robert John, Victor, NY, United States
Metcalf, Benjamin J., Rochester, NY, United States
Peek, Joel A., Pittsford, NY, United States
Sankaran, Banumathi, Penfield, NY, United States
Fletcher, Leah Diane, Geneseo, NY, United States
PATENT ASSIGNEE(S): Genset, S.A., FRANCE (non-U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|--------------|
| PATENT INFORMATION: | US 6559294 | B1 | 20030506 |
| APPLICATION INFO.: | US 1998-198452 | | 19981123 (9) |

| | NUMBER | DATE |
|-----------------------|----------------|----------|
| PRIORITY INFORMATION: | FR 1997-14673 | 19971121 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Borin, Michael | |
| ASSISTANT EXAMINER: | Zhou, Shubo | |

LEGAL REPRESENTATIVE: Saliwanchik, Lloyd & Saliwanchik
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 8682

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The subject of the invention is the genomic sequence and the nucleotide sequences encoding polypeptides of Chlamydia pneumoniae, such as cellular envelope polypeptides, which are secreted or specific, or which are involved in metabolism, in the replication process or in virulence, polypeptides encoded by such sequences, as well as vectors including the said sequences and cells or animals transformed with these vectors. The invention also relates to transcriptional gene products of the Chlamydia pneumoniae genome, such as, for example, antisense and ribozyme molecules, which can be used to control growth of the microorganism. The invention also relates to methods of detecting these nucleic acids or polypeptides and kits for diagnosing Chlamydia pneumoniae infection. The invention also relates to a method of selecting compounds capable of modulating bacterial infection and a method for the biosynthesis or biodegradation of molecules of interest using the said nucleotide sequences or the said polypeptides. The invention finally comprises, pharmaceutical, in particular vaccine, compositions for the prevention and/or treatment of bacterial, in particular Chlamydia pneumoniae, infections.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 22 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2002:301103 USPATFULL
TITLE: Polymerases for analyzing or typing polymorphic nucleic acid fragments and uses thereof
INVENTOR(S): Solus, Joseph, Gaithersburg, MD, UNITED STATES
Yang, Shuwei, Rockville, MD, UNITED STATES
Chatterjee, Deb K., North Potomac, MD, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 2002168646 | A1 | 20021114 |
| APPLICATION INFO.: | US 2001-891332 | A1 | 20010627 (9) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 1998-19160, filed on 6 Feb 1998, PATENTED | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1998-70562P | 19980106 (60) |
| | US 1997-37393P | 19970207 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W., SUITE 600, WASHINGTON, DC, 20005-3934 | |
| NUMBER OF CLAIMS: | 67 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 20 Drawing Page(s) | |
| LINE COUNT: | 4577 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides methods for use in identifying, analyzing and typing polymorphic DNA fragments, particularly minisatellite, microsatellite or STR DNA fragments. In particular, the invention provides methods using DNA polymerases, more particularly thermostable DNA polymerases, and most particularly Thermotoga polymerases or mutants or derivatives thereof, whereby minisatellite, microsatellite or STRDNA molecules may be amplified and analyzed for polymorphisms. The invention also relates to polymerases having reduced, substantially reduced or eliminated ability to add non-template 3' nucleotides to a synthesized nucleic acid molecule. In accordance with the invention, such reduction

or elimination may be accomplished by modifying or mutating the desired polymerase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 23 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2002:325869 USPATFULL
TITLE: Bacteriophage RM 378 of a thermophilic host organism
INVENTOR(S): Hjorleifsdottir, Sigridur, Reykjavik, ICELAND
Hreggvidsson, Guðmundur O., Reykjavik, ICELAND
Fridjonsson, Olafur H., Reykjavik, ICELAND
Aevarsson, Arnthor, Hveragerdi, ICELAND
Kristjansson, Jakob K., Reykjavik, ICELAND
PATENT ASSIGNEE(S): Prokaria Ltd., Reykjavik, ICELAND (non-U.S.
corporation)

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|--------------|
| PATENT INFORMATION: | US 6492161 | B1 | 20021210 |
| APPLICATION INFO.: | US 2000-585858 | | 20000601 (9) |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1999-137120P | 19990602 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Housel, James | |
| ASSISTANT EXAMINER: | Foley, Shanon | |
| LEGAL REPRESENTATIVE: | Hamilton, Brook, Smith & Reynolds, P.C. | |
| NUMBER OF CLAIMS: | 4 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 83 Drawing Figure(s); 83 Drawing Page(s) | |
| LINE COUNT: | 8781 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel bacteriophage RM 378 of *Rhodothermus marinus*, the nucleic acids of its genome, nucleic acids comprising nucleotide sequences of open reading frames (ORFs) of its genome, and polypeptides encoded by the nucleic acids, are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 24 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2002:63712 USPATFULL
TITLE: Exonuclease-mediated nucleic acid reassembly in directed evolution
INVENTOR(S): Short, Jay M., Rancho Santa Fe, CA, United States
Djavakhishvili, Tsotne David, San Diego, CA, United States
PATENT ASSIGNEE(S): Frey, Gerhard Johann, San Diego, CA, United States
Diversa Corporation, San Diego, CA, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 6361974 | B1 | 20020326 |
| APPLICATION INFO.: | US 2000-535754 | | 20000327 (9) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 2000-522289, filed on 9 Mar 2000 Continuation-in-part of Ser. No. US 2000-498557, filed on 4 Feb 2000 Continuation-in-part of Ser. No. US 2000-495052, filed on 31 Jan 2000 Continuation-in-part of Ser. No. US 1999-332835, filed on 14 Jun 1999 Continuation-in-part of Ser. No. US 1999-276860, filed on 26 Mar 1999 Continuation-in-part of Ser. No. US 1999-267118, filed on 9 Mar 1999 Continuation-in-part of Ser. No. US 1999-246178, filed | | |

on 4 Feb 1999 Continuation-in-part of Ser. No. US 1998-185373, filed on 3 Nov 1998 Continuation of Ser. No. US 1996-760489, filed on 5 Dec 1996, now patented, Pat. No. US 5830696 Continuation-in-part of Ser. No. US 1997-962504, filed on 31 Oct 1997, now patented, Pat. No. US 6029056 Continuation-in-part of Ser. No. US 1996-677112, filed on 9 Jul 1996, now patented, Pat. No. US 5965408 Continuation-in-part of Ser. No. US 1996-651568, filed on 22 May 1996, now patented, Pat. No. US 5939250

| | NUMBER | DATE |
|-----------------------|--|--------------------------------|
| PRIORITY INFORMATION: | US 1995-8311P
US 1995-8316P | 19951207 (60)
19951207 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Park, Hankyel T. | |
| LEGAL REPRESENTATIVE: | Gray Cary Ware & Freidenrich, Haile, Lisa A., Shen, Greg | |
| NUMBER OF CLAIMS: | 15 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 6 Drawing Figure(s); 6 Drawing Page(s) | |
| LINE COUNT: | 7313 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides methods of obtaining novel polynucleotides and encoded polypeptides by the use of non-stochastic methods of directed evolution (DirectEvolution.TM.). A particular advantage of exonuclease-mediated reassembly methods is the ability to reassemble nucleic acid strands that would otherwise be problematic to chimerize. Exonuclease-mediated reassembly methods can be used in combination with other mutagenesis methods provided herein. These methods include non-stochastic polynucleotide site-saturation mutagenesis (Gene Site Saturation Mutagenesis.TM.) and non-stochastic polynucleotide reassembly (GeneReassembly.TM.). This invention provides methods of obtaining novel enzymes that have optimized physical &/or biological properties. Through use of the claimed methods, genetic vaccines, enzymes, small molecules, and other desirable molecules can be evolved towards desirable properties. For example, vaccine vectors can be obtained that exhibit increased efficacy for use as genetic vaccines. Vectors obtained by using the methods can have, for example, enhanced antigen expression, increased uptake into a cell, increased stability in a cell, ability to tailor an immune response, and the like. Furthermore, this invention provides methods of obtaining a variety of novel biologically active molecules, in the fields of antibiotics, pharmacotherapeutics, and transgenic traits.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 25 OF 26 USPATFULL on STN
ACCESSION NUMBER: 2000:105661 USPATFULL
TITLE: Detectably labeled, dual conformation oligonucleotide probes, assays and kits
INVENTOR(S): Tyagi, Sanjay, New York, NY, United States
Kramer, Fred R., Riverdale, NY, United States
Lizardi, Paul M., Cuernavaca, Mexico
PATENT ASSIGNEE(S): The Public Health Research Institute of the City of New York, Inc., NY, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 6103476 | | 20000815 |
| APPLICATION INFO.: | US 1999-268402 | | 19990315 (9) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1995-439819, filed on 12 May 1995, now patented, Pat. No. US 5925517 which is a | | |

continuation-in-part of Ser. No. US 1993-152006, filed
on 12 Nov 1993, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Campbell, Eggerton A.
LEGAL REPRESENTATIVE: Fish & Richardson P.C.
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 14 Drawing Figure(s); 14 Drawing Page(s)
LINE COUNT: 2522

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Unimolecular and bimolecular hybridization probes for the detection of nucleic acid target sequences comprise a target complement sequence, an affinity pair holding the probe in a closed conformation in the absence of target sequence, and either a label pair that interacts when the probe is in the closed conformation or, for certain unimolecular probes, a non-interactive label. Hybridization of the target and target complement sequences shifts the probe to an open conformation. The shift is detectable due to reduced interaction of the label pair or by detecting a signal from a non-interactive label. Certain unimolecular probes can discriminate between target and non-target sequences differing by as little as one nucleotide. Also, universal stems and kits useful for constructing said probes. Also, assays utilizing said probes and kits for performing such assays.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 26 OF 26 USPATFULL on STN
ACCESSION NUMBER: 1999:81709 USPATFULL
TITLE: Detectably labeled dual conformation oligonucleotide probes, assays and kits
INVENTOR(S): Tyagi, Sanjay, New York, NY, United States
Kramer, Fred R., Riverdale, NY, United States
Lizardi, Paul M., Cuernavaca, Mexico
PATENT ASSIGNEE(S): The Public Health Research Institute of the City of New York, Inc., New York, NY, United States (U.S. corporation)

| NUMBER | KIND | DATE |
|--------|------|------|
|--------|------|------|

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PATENT INFORMATION: US 5925517 19990720
APPLICATION INFO.: US 1995-439819 19950512 (8)
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-152006, filed
on 12 Nov 1993, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Campbell, Eggerton A.
LEGAL REPRESENTATIVE: Fish & Richardson P.C.
NUMBER OF CLAIMS: 119
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 14 Drawing Figure(s); 14 Drawing Page(s)
LINE COUNT: 2983

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Unimolecular and bimolecular hybridization probes for the detection of nucleic acid target sequences comprise a target complement sequence, an affinity pair holding the probe in a closed conformation in the absence of target sequence, and either a label pair that interacts when the probe is in the closed conformation or, for certain unimolecular probes, a non-interactive label. Hybridization of the target and target complement sequences shifts the probe to an open conformation. The shift is detectable due to reduced interaction of the label pair or by detecting a signal from a non-interactive label. Certain unimolecular probes can discriminate between target and non-target sequences differing by as little as one nucleotide. Also, universal stems and kits useful for constructing said probes. Also, assays utilizing said probes

and kits for performing such assays.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his full

(FILE 'HOME' ENTERED AT 21:40:09 ON 25 MAY 2006)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 21:40:31 ON 25 MAY 2006
SEA POLYMERAS? (S)DNA?

5500 FILE ADISCTI
260 FILE ADISINSIGHT
63 FILE ADISNEWS
4297 FILE AGRICOLA
379 FILE ANABSTR
74 FILE ANTE
108 FILE AQUALINE
1629 FILE AQUASCI
5780 FILE BIOENG
71017 FILE BIOSIS
20594 FILE BIOTECHABS
20594 FILE BIOTECHDS
43907 FILE BIOTECHNO
14152 FILE CABA
59120 FILE CAPLUS
1051 FILE CEABA-VTB
177 FILE CIN
908 FILE CONFSCI
27 FILE CROPB
80 FILE CROPU
604 FILE DDFB
1919 FILE DDFU
133931 FILE DGENE
3820 FILE DISSABS
604 FILE DRUGB
3190 FILE DRUGU
525 FILE EMBAL
51493 FILE EMBASE
28077 FILE ESBIOBASE
623 FILE FROSTI
407 FILE FSTA
1534612 FILE GENBANK
135 FILE HEALSAFE
5709 FILE IFIPAT
41 FILE IMSDRUGNEWS
72 FILE IMSRESEARCH
5626 FILE JICST-EPLUS
38 FILE KOSMET
36341 FILE LIFESCI
57883 FILE MEDLINE
507 FILE NTIS
2 FILE NUTRACEUT
507 FILE OCEAN
31260 FILE PASCAL
208 FILE PCTGEN
547 FILE PHAR
35 FILE PHARMAML
2 FILE PHIC
272 FILE PHIN
2652 FILE PROMT

236 FILE PROUSDDR
6 FILE RDISCLOSURE
40090 FILE SCISEARCH
5 FILE SYNTHLINE
25034 FILE TOXCENTER
67666 FILE USPATFULL
6062 FILE USPAT2
8 FILE VETB
52 FILE VETU
132 FILE WATER
6559 FILE WPIDS
45 FILE WPIFV
6559 FILE WPINDEX
171 FILE IPA
256 FILE NAPRALERT
2364 FILE NLDB
L1 QUE POLYMERAS? (S) DNA?

D RANK

FILE 'BIOSIS, USPATFULL, CAPLUS, MEDLINE, EMBASE, BIOTECHNO, SCISEARCH, LIFESCI' ENTERED AT 21:44:53 ON 25 MAY 2006
L2 427517 SEA POLYMERAS? (S) DNA?
L3 30762 SEA L2 (S) (PFU? OR TAQ? OR FURIO? OR AQUATIC?)
L4 4130 SEA L3 (S) EXONUCLEAS?
L5 94 SEA L4 (S) (ENHANC? OR DUTPAS?)
L6 90 DUP REM L5 (4 DUPLICATES REMOVED)
D TI L6 1-90
D IBIB ABS L6 10 11 16 28 36 44 48 74 78 83 88 90
L7 26 SEA L4 (S) (GP32? OR GP?)
L8 26 DUP REM L7 (0 DUPLICATES REMOVED)
D TI L8 1-26
D L8 IBIB ABS
D L8 1-26 IBIB ABS

FILE HOME

FILE STNINDEX

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNS) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 24 May 2006 (20060524/ED)

FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 25 May 2006 (20060525/PD)
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FILE CAPLUS

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